

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A system for storing checkpoint data comprising:

a network interface to an external network; and

a persistent memory unit coupled to the network interface, wherein:

the persistent memory unit is configured to receive the checkpoint data into a region of the persistent memory unit via a remote direct memory write command from a primary process through the network interface, and to provide access to the checkpoint data in the region via a remote direct memory read command from a backup process through the network interface, wherein the remote direct memory write command is preceded by a create request for the region and the read command is preceded by an open request for the region; and

the backup process provides recovery capability in the event of a failure of the primary process.

2. (Previously Presented) The system of Claim 1, further comprising:

a persistent memory manager configured to provide address context information to the network interface.

3. (Previously Presented) The system of Claim 1, wherein the persistent memory unit is configured to provide remote direct memory read access to the checkpoint data to another processor, and the backup process is executed by the other processor.

4. (Previously Presented) The system of Claim 1, wherein the persistent memory unit provides the checkpoint data through remote direct memory reads by the backup process after the primary process fails.

5. (Previously Presented) The system of Claim 1, wherein the persistent memory unit is configured to store multiple sets of checkpoint data through remote direct memory writes sent from the processor at successive time intervals.

6. (Previously Presented) The system of Claim 5, wherein the persistent memory unit provides the multiple sets of checkpoint data through remote direct memory reads upon request by the backup process at one time.

7. (Previously Presented) The system of Claim 1, wherein the primary process provides the checkpoint data to the persistent memory unit independently from the backup process.

8. (Original) The system of Claim 1, wherein the persistent memory unit is configured as part of a remote direct memory access-enabled system area network.

9. (Original) The system of Claim 1, wherein the persistent memory unit is configured with address protection and translation tables to authenticate requests from remote processors, and to provide access information to authenticated remote processors.

10-37. (Cancelled)

38. (Previously Presented) The system of Claim 1, wherein the persistent memory unit is further configured to store meta-data regarding the contents and layout of memory regions within the persistent memory unit and to keep the meta-data consistent with the checkpoint data stored on the persistent memory unit.

39. (Previously Presented) The system of Claim 1, wherein the persistent memory unit is further configured to provide access to the checkpoint data in another region via a remote direct memory read command from the backup process through the network interface, wherein the read command is preceded by an open request for the another region.

40. (New) The method of Claim 1, wherein the checkpoint data received by the persistent memory unit overwrites a current set of the checkpoint data.

41. (New) The method of Claim 1, wherein the checkpoint data received by the persistent memory unit is appended to a previous set of the checkpoint data.